

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 April 2001 (26.04.2001)

PCT

(10) International Publication Number
WO 01/28343 A1

(51) International Patent Classification⁷: A01N 65/00,
45/02, 35/06, 31/04

Betty, C., R. [US/US]; 13755 Kenner Avenue, Unit D,
Baton Rouge, LA 70810 (US).

(21) International Application Number: PCT/US00/29006

Agent: DAVIS, Bonnie, J.; Taylor, Porter, Brooks
& Phillips, L.L.P., P.O. Box 2471, Baton Rouge, LA
70821-2471 (US).

(22) International Filing Date: 18 October 2000 (18.10.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/160,251 19 October 1999 (19.10.1999) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(71) Applicant (*for all designated States except US*): BOARD
OF SUPERVISORS OF LOUISIANA STATE UNI-
VERSITY AND AGRICULTURAL AND MECHAN-
ICAL COLLEGE [US/US]; c/o Louisiana Agricultural
Experiment Station, Louisiana State University Agricul-
tural Center Building, P.O. Box 25055, Baton Rouge, LA
70894-5055 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- With international search report.
- Before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments.

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): HENDERSON,
Gregg [US/US]; 6825 Bayou Paul Road, St. Gabriel, LA
70776 (US). LAINE, Roger, A. [US/US]; 298 Cornell
Avenue, Baton Rouge, LA 70808 (US). HEUMANN,
Donald, O. [US/US]; 308 Rue St. Peter, Metairie, LA
70005 (US). CHEN, Feng [US/US]; Apartment 4, 740
West Chimes Street, Baton Rouge, LA 70802 (US). ZHU,

(54) Title: VETIVER OIL EXTRACTS AS TERMITE REPELLENT AND TOXICANT

(57) Abstract: Extracts of vetiver oil were found to significantly repel termites. In one extract, nootkatone was isolated and found to be a significant repellent and toxicant of termites. Nootkatone significantly decreased food consumption, decreased tunneling behavior, and increased mortality in termites. Nootkatone is an effective repellent and toxicant of termites either by itself or as an addition to other materials or substrates, including mulches made from vetiver grass roots or other wood products. Nootkatone can also be used to protect construction wood from attack by Formosan subterranean termites. Nootkatone as a repellent is non-toxic to humans and other mammals and is environmentally safe. In addition, α -cedrene was found to be a weak termite repellent; and both zizanol and bicyclovetivenol were found to be repellents and toxicants of termites.



WO 01/28343 A1